

# HUMAN ETHOLOGY NEWSLETTER

Editor Cheryl Travis Dept. of Psychology Univ. of Tennessee, Knoxville, TN 37916  
Summer, 1979, #26

The newsletter is published quarterly and has several regular features, such as book reviews and forum discussions. Announcements of future meetings, notices of graduate programs, job announcements, etc. will be included to the extent that space allows. The subscription price is \$3.00 and includes membership in the International Society for Human Ethology. Subscriptions are valid on a January to January basis. Please send checks payable to the Human Ethology Newsletter, % Cheryl Travis, Dept. of Psychology, University of Tennessee, Knoxville, TN 37916, USA. Your subscription should include a clear and readily discernable mailing address. Foreign subscribers should make checks or money orders payable in U.S. dollars; the time and charges necessary to credit foreign currencies is prohibitive.

If there is a red check mark here, your subscription is past due. \_\_\_\_\_

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## HUMAN ETHOLOGY ABSTRACTS

Bob Adams edited the Human Ethology Abstracts for 1979, and they are currently in the final stages for submission to Man-Environment Systems, where the first two editions were published. They should be available by December if previous schedules are any indication.

The 1980 abstracts will be edited by Larry Stettner, Dept. of Psychology, Wayne State University, Detroit, MI, 48202 USA. The job is a difficult one and requires hours of searching the journals of several disciplines. Computer searches are not helpful at this stage of our discipline for a number of reasons. If you want to see the Human Ethology Abstracts continue as a valuable compendium you must provide some assistance to Larry. Send abstracts of your papers, published and unpublished, to Larry. Encourage your colleagues and your students to do likewise. You might also be of some service by abstracting a few articles you have recently found useful in your own research and send these along to Larry as well. If each person who receives this letter were to abstract five papers we could all profit immensely. Think of it as an opportunity for reciprocal altruism.

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## COMMITTEE STRUCTURE INTERNATIONAL SOCIETY FOR HUMAN ETHOLOGY

The following people are chairing or co-chairing the various committees for ISHE. They would appreciate your input, comments, observations, and your energy in formulating policies, and planning future projects.

### **\*\*\*Nominations and Elections\*\*\***

Joan Lockard, Dept. of Neurological Surgery, Univ. of Washington, Seattle, WA 98195

-During the next year, spring of 1980 to be exact, we must elect new board members to replace those who are now serving two year terms. Joan would like volunteers who

do not wish to seek office themselves. This would be an excellent way in which to get to know the membership.

\*\*\*Membership\*\*\*

Ron Simons, Dept. of Psychiatry, East Fee Hall, Michigan State Univ., East Lansing, MI 48824

-Ron plans to send information on ISHE and our newsletter to other societies, newsletter editors, and appropriate people around the world to advertise our existence and improve our communication with related societies and potential new members. If you have an idea about a newsletter or association, anywhere in the world, which might be willing to make an announcement about the society, please send information about same to Ron.

\*\*\*Constitution and Bylaws\*\*\*

Needless to say, this is a small committee, Bob could use some help.

\*\*\*International Meetings\*\*\*

W. C. McGrew, Dept. of Psychology, Univ. of Stirling, Stirling FK9 4LA, SCOTLAND  
Bob Marvin, Dept. of Psychology, Univ. of Virginia, Charlottesville, VA 22504

-Bill McGrew is working on a tentative time frame which calls for an international meeting in the summer of 1980; probably some time in July. Any ideas for symposia, paper sessions, workshops, etc. should be sent to both chairperson so as to avoid communication delays. The meeting site is open at this moment, but the Association for the Study of Animal Behaviour will also be meeting in July in Glasgow; so Scotland is a strong possibility which would allow us to attend both meetings. Volunteers to work on publicity, program scheduling and reviewing should write, again to both, chairpersons.

\*\*\*National Meetings\*\*\*

Don Omark, Office of Bilingual Bicultural Education, Univ. of Illinois at Urbana-Champaign, 140 Education Bldg., Urbana, IL 61801  
Stephen Thayer, Dept. of Psychology, The City College, Convent Ave. at 133rd St., New York, NY 10031

-The spring quarter newsletter contained a membership questionnaire concerned with goals and objectives of our national meetings and possible alternative meeting formats. Replies and comments are being tabulated by Steve. One issue that is salient is the visibility of ISHE, and the possibility that it might be improved by having an independent conference. We have urged members of the Animal Behavior Society executive committee to invite a keynote speaker who specializes in humans for the ABS conference next year.

\*\*\*Publications\*\*\*

Larry Stettner, Dept. of Psychology, Wayne State University, Detroit, MI 48202  
Cheryl Travis, Dept. of Psychology, Univ. of Tennessee, Knoxville, TN 37916

If you have any suggestions for forum topics in the newsletter, additional sections for the newsletter, or would like to develop your own section, write to Cheryl. Information and opinions about the editorial policy, goals, and objectives of a formal journal sponsored by the society should be sent to both chairpersons.

BOOKS

Ecology and the Politics of Scarcity. By William Ophuls. San Francisco: W.H. Freeman and Co., 1977. 303 pp. \$7.95

Evolution and Consciousness: Human Systems in Transition. By Erich Jantsch and Conrad H. Waddington. Reading: Addison-Wesley Publishing Company, 1976, 259 pp. \$23.50, hard cover. \$11.50 paper.

Extinction and Survival in Human Populations. By Charles D. Laughlin, Jr. and Ivan A. Brady. New York: Columbia University Press, 1978. \$8.95 paper.

The Triumph of Evolution: American Scientists and the Heredity-Environment Controversy. By Hamilton Cravens. Philadelphia: University of Pennsylvania Press, 1978. 350 pp. \$17.50

The Sociobiology Debate: Readings on Ethical and Scientific Issues. Edited by Arthur L. Caplan. New York: Harper and Row, 1978. \$12.95 hardcover, \$6.95 paper.

The Biological Origin of Human Values. By George Edgin Pugh. Basic Books, 1977, 461 pp., \$20.

Biosocial Bases of Criminal Behavior. By S. A. Mednick and K. O. Christiansen (eds.) New York: Gardner Press (Halsted), 1977, 430 pp., \$22.95.

Vertebrate Social Organization. Edwin M. Banks (ed.) New York: Dowden, Hutchinson & Ross (Halsted), 1977, 400 pp., \$25.

Intercultural Sourcebook: Cross-Cultural Training Methodologies. David S. Hoopes and Paul Ventura, (Eds.) Published by The Society for Intercultural Education, Training and Research and The Intercultural Network, Inc.. Methods are grouped under ten headings: Role-Playing, Simulations, The Contrast-American, The Culture Assimilator, Self-Awareness Inventories, Workbook Approaches, Critical Incidents, Case Studies, Other Group Experiences, and Area-Specific Training. Each section includes articles and exercises contributed by experienced practitioners in the intercultural field.

Animal Behavior: An Evolutionary Approach. Second Edition. By John Alcock. Sunderland, Mass.: Sinauer Assoc. May 1979, 544 pp. 240 illustrations, \$16 cloth. Chapter 1 discusses natural selection and its implications for understanding behavior. Chapters 2-5 examine the genetic and physiological bases of behavior, giving evidence that all behavior bears the imprint of natural selection. Chapter 6 shows how one can make and test evolutionary predictions about how animals should behave in their environments. In Chapters 7-10 the author shows the correlation between the ecological pressures acting on a species and its reproductive behavior, habitat selection, feeding, and antipredator behavior. Chapters 11 and 12 deal with the historical foundation of behavior with special emphasis on the origins of communication systems and complex societies. The final chapter applies evolutionary principles to human behavior. Each chapter concludes with a summary and suggested readings and films. The bibliography, author and subject indexes have been expanded and the film index is now organized by distributor for teacher convenience.

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# BOOK REVIEWS

Each issue of the newsletter contains one or more reviews of current books of interest to human ethologists. These books may be summaries of empirical research, or they may be theoretically focused; they may be basically reference works or they may be introductory level texts. The focus of these books does not have to be entirely on humans. If you know of such a book that could be reviewed in the newsletter, please send a note to Marjorie Elias at Children's Hospital, Boston, Mass.

If you would be willing to serve as an occasional reviewer, please send your name and some background information on your areas of interest to Marjorie at the same address. One of the small rewards for such service is a free copy of the book you review.

\*\*\*Sex, Evolution, & Behavior\*\*\*  
by Martin Daly & Margo Wilson  
North Scituate, Mass.: Duxbury Press

Daly & Wilson have produced an excellent introduction to the modern (socio-biological) evolutionary account of behavior. Focusing on the behaviors involved in courtship, mating, and parental care, they show how notions of individual selection and inclusive fitness can account for both the diversity and uniformity of the character of sexual behavior among species. Their presentation is well-tempered with excursions marking the limits of evolutionary explanations and the importance of recognizing the distinctions among the four questions Tinbergen posed for studying behavior.

Chapter one nicely demonstrates how a full account of sex and sexual behavior necessarily entails multiple explanations in terms of adaptive significance, phylogenetic history, proximate causal conditions, and developmental processes. Chapter two and three provide clear accounts of the concepts of evolutionary population genetics (individual selection, inclusive fitness, etc.). Daly & Wilson then introduce the concept of strategy as a short-hand way of describing the processes by which natural selection results in organisms with optimal fitness. Unfortunately, they do not describe any of the negative consequences that might arise when the metaphor of a strategy begins to be used as a real, unitary construct.

Given the notion of evolutionarily significant strategies, Daly & Wilson begin to present the main theme of the book: males and females will have evolved separate strategies of sexual behavior derived directly from the evolution of sex. Their account of the adaptive advantages of sex and why there are usually two sexes is not only thoughtfully presented but I would imagine that it would convince even the naive reader of the importance of these issues.

Chapters four and five document how the relative costs of mating for males and females augment the adaptive significance of courtship and account not only for behavioral differences between the sexes but also for the diversity of mating patterns exhibited by animals. Daly & Wilson describe a balance between mating patterns and social organization which reflects the contribution of ecological variables and the preadaptations of taxonomic status.

Placing parental care (chapter 6) within a socioecological context they account for phenomena of sex role reversal, brood parasitism, low reproductive rates, and other peculiarities. They also provide the best general discussion of "parent-offspring conflict" that I have read. They try to adhere closely to data, avoid ambiguous notions, and assiduously attend to the distinction between ultimate and proximate factors.

The chapter (7) on sexual physiology and reproductive strategies is the least effective in the book. Perhaps, it is because Daly & Wilson make no attempt to deal with the data on sexual behavior derived from neurobiology. Instead, they concentrate on transitions in hormone-behavior relations within breeding cycles. They do note that in species which share parental duties, male and female strategies are more alike.

Chapter 8 adequately reviews the psychobiological, psychological, and anthropological literature concerning the sexual differentiation of behavior. In doing so, Daly & Wilson provide an excellent general account of the epigenetic notion of development. While reading this chapter I was struck by the realization that as much as the sociobiological perspective may provide a meaningful context for understanding the diversity of behavior it is equally likely that as we come to understand better the epigenetic course of behavioral development of more species the genetic models currently used in sociobiology will be significantly altered. We will have to stop simply assuming some relation between genotype and behavioral phenotype and begin to characterize the relation by studies of behavioral development. Natural selection obviously concerns the epigenetic processes of development.

The final chapter integrates the information about human marriage patterns, emotions and attitudes, sexual activities, etc. into the general theme that males and females pursue different reproductive strategies. Sometimes Daly & Wilson appear to lose the clarity of the argument as they become immersed in the provocative examination of the adaptiveness of human behavior. However, on the whole, they avoid the confusion of evolutionary notions with social-political notions.

This book should be required reading of every prepared undergraduate and graduate student studying animal behavior. It is also to be recommended to the professional for its wealth of information and clearly presented ideas, concepts, and hypotheses.

George F. Michel  
Dept. of Psychiatry  
Children's Hospital Medical Center  
Boston, Mass.

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#### FORUM

##### --Fall Quarter--

The fall quarter forum will focus on methodology, including techniques of observation, issues of reliability and validity, hardware systems, and design problems. If you have successfully, or not so successfully, adopted a methodology in any one of these areas please submit a paper for possible inclusion in the fall quarter forum. Papers can be a maximum of 1000 words, but shorter contributions are preferred. Send your comments to Cheryl Travis, Dept. of Psychology, University of Tenn., Knoxville, TN 37916; papers must be received by October 1.

##### --Winter Quarter--

The winter quarter forum will focus on teaching human ethology. One way to enhance the legitimacy of human ethology is to introduce it to the graduate and undergraduate curriculum. A number of such courses are being taught around the country under a variety of titles. The International Society for Human Ethology would like to collect a resource file on such courses which includes course outlines, information on possible textbooks, resource materials, films, class projects, assessment of performance, etc. The general pattern of these materials will be

summarized in the winter quarter issue and some examples of materials will be included for those who are trying to design their own courses. If this project is successful, we anticipate a periodic update on materials, and perhaps eventually a workshop at a conference. If you do not teach such a course, but have developed some opinions about what should be included in one, you are also invited to comment. Send your papers to: Joan Lockard, Dept. of Neurological Surgery, Univ. of Washington, Seattle, WA; papers must be received by January 1.

On Human Nature, E. O. Wilson

The purpose of this Forum is to offer some opinions on Wilson's formulation of sociobiology in his book On Human Nature. Wilson's ideas have both theoretical and political significance for human ethologists, so let's examine some of their implications. A review by G. Zivin is followed by comments by G. Michel and M. J. Konner.

M. F. Elias, Book Editor

On Human Nature

by E. O. Wilson

Harvard University Press, 1978

\$12.50 260 pp.

On Human Nature aims to persuade the non-sociobiological public of the validity (and value) of sociobiological explanations of human social behavior. It does this in a more measured manner than Wilson had used in Sociobiology: The New Synthesis. The newer book is an excellent brief and concise introduction in lay terms to the major concepts necessary to understand the premises and forms of sociobiological explanations. The presentation of sociobiology itself (as distinguished from its future potential) is an easier layman's introduction to the field than the one in Sociobiology, partially because On Human Nature omits concepts of population genetics. After the first chapter states the moral-practical dilemmas created by taking seriously sociobiological explanations of human behavior, the second chapter sketches the field's main explanatory routes to human social behavior. It emphasizes inheritance of "the elements of human nature...the learning rules, emotional reinforcers, and hormonal feedback loops that guide the development of social behavior" (p. 196), culture as hypertrophy, and the role that biology has in setting limits and tendencies rather than in making determinations, and it hints at the methodology used to test inheritance and adaptive function. Then follow chapters on, respectively, Development, Emergence (of civilization, not of irreducible new levels of explanation), Aggression, Sex, and Altruism. Each chapter marshalls the most solid and/or interesting sociobiological thinking in order to illustrate how each area comes under the field's purview. The final chapter, Hope, expresses Wilson's unbridled (and undefended) optimism that man's "exercise of will" and "nobility" can create a better world with sociobiological information. A glossary ends the book and strengthens its basic teaching capacity.

Of more immediate interest to sociobiologists are Wilson's attempts to take on, or at least acknowledge, many of the ethical and political objections that arose in response to his Sociobiology (e.g., questions of free will, genetic determinism, oppressive uses of sociobiology, eugenics). He also presents his epistemological justification for his claim that sociobiology can encompass or explain the social sciences and the humanities: the reductionism (or "antidiscipline relationship")

known in the physical sciences can simply be extended up through the larger and larger units that characterize the other disciplines. (Wilson does note, in passing, the irrelevance of sociobiology to art's unique function of "transmitting experience on a personal level.") This full set of sometimes satisfactory, sometimes contradictory treatments of the larger questions raised by Sociobiology is of great use to sociobiologists. It informs them of the directions and distances to which Wilson, as the most popularly known spokesman for the field, has taken the resolutions of those issues.

Gail Zivin  
Department of Psychology  
Beaver College  
Glenside, PA 19038

Comment: Oh, What Hath Wilson Wrought?

Wilson correctly states that On Human Nature (OHN) is not a work of science. Rather, OHN seems meant to persuade the reader of how effectively current notions of sociobiology can account for some of the more bewildering phenomena of human existence (aggression and war, sexual differences and preferences, selfishness and altruism, religion, cults, and sociopolitical dogma). With well-phrased rhetoric, careful selection and presentation of evidence and example, Wilson destroys the arguments for cultural relativism, environmental determinism, and transcendental forces and values in human behavior and personality. Apparently, only sociobiology, in combination with neurobiology, can offer explanations of human behavior which are scientifically worthy. Does this mean Wilson has presented the scientific alternatives to sociobiology and found them wanting? No, like some evangelist preacher, Wilson creates (non-scientific) alternatives to his position which appear obviously wrong.

Wilson has packed his arguments in favor of evolved, neurally controlled predispositions with research evidence the meaning and validity of which are controversial or questionable. Indeed, at times non-evidence is presented as evidence. For example, Wilson quotes, at great length, Robin Fox's assertion that if children were reared in isolation from civilization, the evolutionarily created brain programs would cause them to recreate all of the basic characteristics of civilization. The actual evidence on children reared in non-civilized conditions would support the opposite conclusion.

In the chapter on development, Wilson creates the impression that some sociobiological analysis of the adaptive significance of a behavioral trait reveals something about the mechanism and course of its development, at least with respect to the specific outcome array. Modern Ethologists have taken great pains to point out that knowledge of the adaptive significance of behavior does not reveal how the behavior occurs. The how of behavior may be answered only by systematic proximate and developmental causal analysis.

Wilson argues that sex differences in children could not be a "response to biased training practices" or child-rearing techniques because "the training would have to be subtle, at least partly unconscious in application and practiced by parents around the world" (p 130). Now, the development of sex differences is a vastly complex phenomenon but modern developmental research indicates that it includes exactly those unconscious subtle techniques Wilson discounts (Cairns, 1978; Luria & Rose, 1978).



It is also difficult to see how any training notion would be incompatible with sociobiological theory. Presumably, at a time when sex differences were adaptive, parents who engaged in such subtle, non-conscious training contributed more genes to the population. Therefore, parental training or child rearing techniques which emphasized minimal sex differences in infancy into major sex differences of adults is as adequate an evolutionary explanation of sex differences as the notion that they are the result of genetically determined neural mechanisms.

"If human beings were endowed with nothing but the most elementary drives to survive and reproduce, together with a capacity for culture, they would still learn many forms of social behavior that increase their biological fitness" (p. 33). It is a pity that Wilson did not consider this alternative more seriously. It is likely that OHN will "convince" the true believer and persuade the naive, but simply frustrate more thoughtful and cautious scientists.

Clearly, On Human Nature is an elaboration of the ideas presented in the last chapter of Wilson's Sociobiology. However, it is not the book on human nature which scientists might have expected Wilson to write. They expected, and rightly so, "a work of science" and OHN is not.

George F. Michel  
Department of Psychiatry  
Children's Hospital Medical Center  
Boston, Mass.

Comment: On Human Nature

Students of human behavior development have traditionally sworn off biology. Or, to put it more exactly, they have, in general signified their intention to operate within the variance remaining within the limits provided by biology. Although in recent decades 'biologizing' has become increasingly legitimate, there have been unwanted presences. In the 1960's scientists and non-scientists alike were addressing the public with poorly formulated notions about the biological basis of aggressiveness, territoriality, and intelligence before those notions were subject to adequate scientific scrutiny. The hold of such notions on the public outlives their real credibility.

More recently more serious efforts have been made to bring to the attention of scientists (Wilson, Sociobiology, 1975) and the public (On Human Nature, 1978) the findings and implications of sociobiology, a newly named subfield of zoology. Sociobiology attempts to integrate theory and data in population genetics, ecology, and animal behavior to produce a comprehensive conception of the adaptive basis of behavior. Though intrinsically more valuable than the earlier popular formulations, this viewpoint has lent itself rather easily to serious misinterpretation by making a premature bid (in the 1975 volume) for public acclaim through unwarranted generalizations about human behavior, together with explicit predictions that sociobiology would soon replace or 'cannibalize' all the other major fields of behavioral science, and even some fields of the humanities. It thus expectedly provoked much criticism from psychologists, anthropologists, and other behavioral scientists, ranging from the informed and constructive to the confused and useless. Though the latest presentation of the viewpoint in On Human Nature is more restrained in its claims and quite well informed about human behavioral biology, the damage, in terms of scientific communication, may have already been done. Behavioral and social scientists may be sufficiently alienated from the viewpoint so as to be unwilling to read the more mature formulation. This will be a pity. It has no specific political implications that I can discern other than to restrain the most utopian notions about the human future; such restraint, I believe, will ultimately enhance the likelihood of less-than-utopian social progress. It is surely one of the most literate and probably one of the most beautiful books ever written by a zoologist. It should be read.

Melvin J. Konner, Dept. of Anthropology  
Harvard University.



# Wilson's On Human Nature and Political Theory

Whatever its limitations, this book strikes me as a most stimulating preliminary essay toward a truly biosocial scientific perspective on human nature and behavior. I restrict my comments to Wilson's discussion of altruism, especially the latter part of chapter 7.

In distinguishing between "hard core" and "soft core" altruism, Wilson takes us beyond the simplistic dichotomy of "immoral" selfishness and "moral" altruism. Phenotypically, self-concern is likely to be the bedrock orientation of any genetically distinct individual of any species, including our own. It seems extremely unlikely that our nature can be reshaped by conditioning and precisely engineered social environments so that we will invariably give first priority to the needs and interests of others without regard to genetic kinship or propinquity. But neither are we warranted in accepting the dogmas of laissez faire. There are no grounds for believing that, in any large and complex society, the unregulated interplay of competing self-interests will automatically produce mutually beneficial social harmony.

Self-concern is an ineradicable fact, but it need not produce a Hobbesian war of all against all; hope lies in our "soft-core" capacity of reciprocal relationships. It may also be found in the tendency for "soft-core" commitments to larger groups and causes to weaken or dissolve when individuals no longer find that particular attachments promote their self-defined interests.

Of course, reciprocally organized self-concern can be thoroughly oppressive and exploitative, as is often true of oligarchies and ruling classes. Very probably, the only means to ameliorate that condition are counter-coalition building and the nurturance of crosscutting social loyalties. These strategies may prove impossible to implement in societies with ruling elites who proclaim an official ideology of pure altruism which they alone have a right to interpret and operationalize.

Reciprocal bargaining aimed at creating optimal social and political arrangements for societies of self-interested individuals who form diverse competing and cooperating groups: not nearly so idealistic and heartwarming a vision as one of ubiquitous, spontaneous, cooperative altruism. But the former perspective seems much less likely to generate the kinds of large-scale oppression and mass murder committed in this bloody century by movements which have tried to implement their proposed final solutions for all social conflict.

Fred H. Willhoite  
Department of Political Science and  
Biosocial Science Program  
Coe College, Cedar Rapids, Iowa 52402

## The Rebuttal

Additional essays on this topic or responses to these comments are solicited from all those interested in human ethology. One of the essential components of any field of research is a shared common ground of knowledge accessible to all workers in that field. By announcing your opinions and your own viewpoint you help to clarify what is commonly accepted and what is a matter for debate. Please send your replies to Cheryl Travis

POSITION AVAILABLE

The Center for Biopolitical Research invites applications for two, one-year post-doctoral research fellowships in biopolitics and/or human social biology. Stipend of \$16,000 for twelve month period beginning January 1, 1980. Applicants will assist Center in developing new research initiatives which will blend human life science perspectives into the study of political behavior. Applicants with specialties in biopolitics, human ethology, psychophysiology, behavioral biology, sociobiology, biomedicine, behavioral human ethology, bioethics, and public health are especially welcome.

Send curriculum vitae, names of three references, and a statement of research interests by September 15 to Thomas C. Wiegale, Director, Center for Biopolitical Research, Northern Illinois University, DeKalb, IL 60115. Telephone (815) 753-0431.

CURRENT CONTENTS

In an effort to facilitate the exchange of information in our widely diversified research efforts a new section has been added to the newsletter, Current Contents. This section will list recent articles and papers pertaining to human ethology. These may be published articles, submitted papers under review, papers delivered at conferences, or unpublished manuscripts. Your assistance is necessary to develop a comprehensive survey. Send your name, affiliation or mailing address, the title of the paper and citation to Cheryl Travis. In addition, if you would list two to four key words which might elaborate the topic of the paper these can be included at the end of the citation. In addition to sending information about your own papers, please send entries of other useful papers you may have discovered in your own review of the literature. I will print the entries received during each quarter. There follows a list of papers which I have received on an informal basis during the past few months, hence they do not have the additional key words and are sometimes missing an affiliation for the author.

\*\*\*Candace Johnson, Mark Gilbert and Cathy Koerner  
Sepulveda Veterans Administration Hospital  
Sepulveda, California 90343

Department of Psychiatry/Biobehavioral Sciences  
Center for the Health Sciences  
Neuropsychiatric Institute  
University of California, Los Angeles  
Los Angeles, California 90024

Behavioral Sciences Foundation  
St. Kitts, West Indies and Los Angeles, California

MATERNAL ATTENTION AS A PREDICTOR OF INFANT INDEPENDENCE IN VERVET MONKEYS

Paper presented at the annual meeting of the Animal Behavior Society, Seattle, Washington. June 19, 1978.

\*\*\*Carol Barner-Barry, Gov't. Dept.  
Lehigh University

THE BIOLOGICAL CORRELATES OF POWER AND AUTHORITY: DOMINANCE AND ATTENTION  
STRUCTURE

Manuscript

\*\*\*Carol Barner-Barry, Gov't. Dept.  
Lehigh University, Bethlehem, PA 18015

THE UTILITY OF ATTENTION STRUCTURE THEORY AND THE PROBLEM OF HUMAN DIVERSITY

Prepared for delivery at the Moscow IPSA Congress of August 12-18, 1979.  
Copyright 1979 International Political Science Association

\*\*\*Roger D. Masters  
Department of Government  
Dartmouth College

CLASSICAL POLITICAL PHILOSOPHY AND CONTEMPORARY BIOLOGY

Prepared for Conference for the Study of Political Thought meetings on  
"Political Theory and the Question of Human Nature" - Loyola University of  
Chicago, Chicago - April 7 - 9, 1978

\*\*\*Robert H. Blank  
Political Science  
University of Idaho

SOCIETAL RESPONSIBILITY AND GENETIC DISEASE: SOME POLITICAL CONSIDERATIONS

Paper presented at the annual meeting of the Western Political Science Association,  
Portland, Oregon, March 1979

\*\*\*Valerius Geist

THE BIOLOGY OF HEALTH

New Scientist, Vol. 81, No. 1143  
February 22, 1979

\*\*\*Fred Kort  
Political Science  
University of Connecticut  
and Stephen C. Maxson  
Biobehavioral Sciences  
University of Connecticut

THE STUDY OF POLITICS IN A BIOBEHAVIORAL PERSPECTIVE: A REPORT ON A COURSE BASED ON  
A NEW PARADIGM.

Paper presented at the annual meeting of the American Society of Criminology,  
Dallas, Texas, November, 1978

\*\*\*Alasdair MacIntyre

SEVEN TRAITS FOR THE FUTURE - DESIGNING OUR DESCENDANTS

Hasting Center Report, Vol. 9, No. 1, February 1979

\*\*\*Steven A. Peterson and Albert Somit  
Social Science, Alfred University

INTERNATIONAL POLITICS: TOWARD A BIOLOGICAL PERSPECTIVE

Paper presented to the annual convention of the International Studies Association, Toronto, March 1979

\*\*\*Thomas C. Wiegeler

BIOLOGICAL DIMENSIONS OF INTERNATIONAL RELATIONS

Paper presented to the International Studies Association convention, Toronto, Canada, March 1979

\*\*\*B. Diane Chepko-Sade and Donald S. Sade  
Northwestern University

ROLE OF MALES IN GROUP FISSION OF MACACA MULATTA

Paper presented at ABS meetings, New Orleans, 1979

\*\*\*Jeanne Altman  
University of Chicago

PARENT-OFFSPRING RELATIONS IN SAVANNAH BABOONS (PAPIO CYNOCEPHALUS): COOPERATION, COMPROMISE, OR CONFLICT?

Paper presented at ABS meetings, New Orleans, 1979

\*\*\*Suzanne J. Weghorst  
University of California, Riverside

HUMAN JEALOUSY AS A REPRODUCTIVE STRATEGY: A FIELD EXPERIMENT

Paper presented at ABS meetings, New Orleans, 1979

\*\*\*Gerald Borgia  
University of Chicago

EVOLUTION OF SEX-RELATED INVESTMENT PATTERNS IN HUMAN POPULATIONS

Paper presented at ABS meetings, New Orleans, 1979